

### Remarks

Support for new claim 33 is at least at page 3, lines 20-24. Support for new claim 34 is at least at page 39, lines 1-11 and page 62, line 1 through page 71, line 8. Claims 33-34 are pending after entry of this amendment.

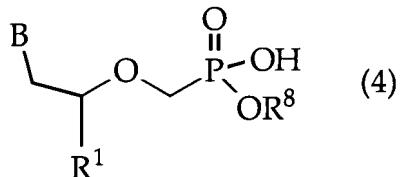
### In the Claims

Please amend the claims as follows.

Cancel claims 1-32.

Add the following new claims.

--33. A method for preparing a compound of formula (1) comprising reacting a compound of formula (4)



with  $LC(R^2)_2OC(O)X(R)_a$  wherein,

B is guanin-9-yl, adenin-9-yl, 2,6-diaminopurin-9-yl, 2-aminopurin-9-yl or their 1-deaza, 3-deaza, or 8-aza analogs, or B is cytosin-1-yl;

X is N or O;

R is independently -H, C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>5</sub>-C<sub>12</sub> aryl, C<sub>2</sub>-C<sub>12</sub> alkenyl, C<sub>2</sub>-C<sub>12</sub> alkynyl, C<sub>7</sub>-C<sub>12</sub> alkenylaryl, C<sub>7</sub>-C<sub>12</sub> alkynylaryl, or C<sub>6</sub>-C<sub>12</sub> alkaryl, any one of which is unsubstituted or is substituted with 1 or 2 halo, cyano, azido, nitro or -OR<sup>3</sup> in which R<sup>3</sup> is C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>2</sub>-C<sub>12</sub> alkenyl, C<sub>2</sub>-C<sub>12</sub> alkynyl or C<sub>5</sub>-C<sub>12</sub> aryl;

R<sup>1</sup> is hydrogen, -CH<sub>3</sub>, -CH<sub>2</sub>OH, -CH<sub>2</sub>F, -CH=CH<sub>2</sub>, or -CH<sub>2</sub>N<sub>3</sub>, or R<sup>1</sup> and R<sup>8</sup> are joined to form -CH<sub>2</sub>-;

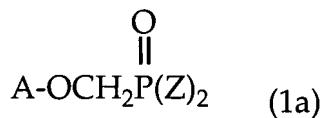
R<sup>2</sup> independently is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl; and

R<sup>8</sup> is hydrogen or -CHR<sup>2</sup>-O-C(O)-OR, or R<sup>8</sup> is joined with R<sup>1</sup> to form -CH<sub>2</sub>-; and

a is 1 when X is O, or 1 or 2 when X is N,

with the proviso that when a is 2 and X is N, (a) two N-linked R groups can be taken together to form <sup>an N-containing</sup> carbocycle or oxygen-containing heterocycle, (b) one N-linked R additionally can be -OR<sup>3</sup> or (c) both N-linked R groups can be -H.

34. A method comprising contacting a cell with a compound of formula (1a)



wherein Z is independently  $-\text{OC}(\text{R}^2)_2\text{OC}(\text{O})\text{X}(\text{R})_a$ , an ester, an amide or ~~H~~<sup>OH</sup>, but at least one Z is  $-\text{OC}(\text{R}^2)_2\text{OC}(\text{O})\text{X}(\text{R})_a$ ;

A is the residue of an antiviral phosphonomethoxy nucleotide analog;  
X is N or O;  
 $\text{R}^2$  independently is -H, C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>5</sub>-C<sub>12</sub> aryl, C<sub>2</sub>-C<sub>12</sub> alkenyl, C<sub>2</sub>-C<sub>12</sub> alkynyl, C<sub>7</sub>-C<sub>12</sub> alkenylaryl, C<sub>7</sub>-C<sub>12</sub> alkynylaryl, or C<sub>6</sub>-C<sub>12</sub> alkaryl, any one of which is unsubstituted or is substituted with 1 or 2 halo, cyano, azido, nitro or  $-\text{OR}^3$  in which R<sup>3</sup> is C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>2</sub>-C<sub>12</sub> alkenyl, C<sub>2</sub>-C<sub>12</sub> alkynyl or C<sub>5</sub>-C<sub>12</sub> aryl;

R independently is -H, C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>5</sub>-C<sub>12</sub> aryl, C<sub>2</sub>-C<sub>12</sub> alkenyl, C<sub>2</sub>-C<sub>12</sub> alkynyl, C<sub>7</sub>-C<sub>12</sub> alkenylaryl, C<sub>7</sub>-C<sub>12</sub> alkynylaryl, or C<sub>6</sub>-C<sub>12</sub> alkaryl, any one of which is unsubstituted or is substituted with 1 or 2 halo, cyano, azido, nitro,  $-\text{N}(\text{R}^4)_2$  or  $-\text{OR}^3$ , where R<sup>4</sup> independently is -H or C<sub>1</sub>-C<sub>8</sub> alkyl, provided that at least one R is not H; and

a is 1 when X is O, or 1 or 2 when X is N;  
with the proviso that when a is 2 and X is N, (a) two N-linked R groups can be taken together to form ~~a~~<sup>an N-containing</sup> carbocycle or oxygen-containing heterocycle, (b) one N-linked R additionally can be  $-\text{OR}^3$  or (c) both N-linked R groups can be -H--

Applicants respectfully request an early examination on the merits.

Respectfully submitted,

*Daryl D. Muenchau*

Daryl D. Muenchau,  
Reg. No. 36,616  
Gilead Sciences, Inc.  
333 Lakeside Dr.  
Foster City, Ca. 94404  
650-573-4712

Dated: 11/6/98